

Fragments, Pivots, Jumps that Relate Narrative and Data: What Makes Digital Publication Different?

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This presentation will discuss the broader implications of digital documentation, presentation and publication for long-term sustainable preservation of humanities research, using the example of our archaeological project from Çatalhöyük, Turkey.

I. Publication: Printed/Analog and Digital

I am using a broad definition of the term “publication” that is “to make something public; the act of making something generally known”. The term “publication” also carries with it the implication of sharing with a broader public than yourself and your immediate familiars to contribute to the accumulation of communal knowledge. Within this term, therefore, are included works shared in various media.

On the one hand, are physical media such as paper (books, reprints, reports, journals, magazines, diaries) or board games and analog media - photographic film and paper, video and audiotapes, and – for us archaeologists – paper field and lab drawings and forms filled with data. Sharing of works on paper is in the hands of publishers and editors who act as the gatekeepers for the distribution of knowledge. For the publication of academic sources of knowledge, the author must traditionally go through the process of peer review in order for his/her work to be respected as a serious contribution to knowledge. There is a considerable body of “grey literature” in archaeology and heritage studies produced as reports for clients that does not go through this process, but receives a much narrower distribution of the work. For creative artists of analog media the distribution of their work is even harder than for academics.

On the other hand, the world of digital (sometimes referred to as electronic) publishing is very new. It may be thought to have started with the Project Gutenberg in 1971 in which copies of public domain literature were reproduced and available on-line; but only with the beginning of the World Wide Web at the beginning of the 1990s did this project’s library increase enormously, along with the publication of on-line editions of magazines, as well as other forms of authoring. By 2000 it was clear that digital publishing was here to stay, but not without resistance from print publishing houses and journals, whose main fear was to lose control over copyright and income from publications and subscriptions. “Digital publishing makes works available instantly, anywhere in the world, while eliminating the high costs of transportation, storage and retail facilities.” The history of arguments for and against digital publication in the 1990s are probably familiar to many of you, including J.

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Yellowlees Douglas, (2001) *The End of Books - or Books without End?* and Jay Bolter and Richard Grusin, (1999) *Remediation: Understanding New Media*.

It is not my intention to follow up on the pros and cons of print versus digital media; that debate continues, and the reason we are here is probably because we fall on the side of digital. My intention, however, is to think of digital publication not as a replacement of printed and analog publication – that is, not as the production of simulacra - but as a way of producing quite different forms of knowledge and quite different ways of sharing with and involving the public in knowledge production: visual and audio exhibits, storytelling through videos, presentations, blogs, database narratives, recombinant histories, reporting new knowledge through a gamification interface; all of which are immediately accessible, can be shared and commented on according to the authors' sharing protocols, are open-ended and modifiable. I do not need to reiterate what other authors have already written, that we are on a path to a complete revolution in "publication". My presentation will be demonstrating this revolution by an example from archaeology.

But before I do so, it is worth remarking that at this year's (2014) annual meeting of the American Association of University Presses, the panel discussion on "Publishing in the Digital Humanities" has been introduced with these words:

"There are significant initiatives at many campuses to invest in the digital humanities. While DH has become a proxy for a lot of different issues, as humanities publishers, it's becoming more and more likely that we will need to expand the capacity for what it is we can publish. DH scholars may continue to write long-form text, but more and more often it will be embedded with DH features such as multimedia files, spatial mapping, data sets, archives, and social sandboxes. How will we publish these? How will these affect the work of editorial, marketing, production, and other staff? What types of collaborations will presses need in order to "publish" these new multimodal books? Will these books be digital-only?"

II. Publication Strategies beyond Traditional Print and Its Digital Simulacra (pdf)

The quote above highlights both the benefit and the under-utilization of digital forms of publication. The benefits of the digital world is that in it different media (in the broadest sense of the term that includes "long-form" text) can be brought together in an immediately accessible web of raw data and interpretation by linking, embedding and generally entangling in a way that cannot be reproduced by physical and analog forms. One of the reasons for the under-utilization of these potential benefits in the humanities is, I believe, the dominance of the long-form text as a means of sharing knowledge (albeit with footnotes); even when digital formats are adopted, the form is still an uneditable linear narrative (pdf) with, at most, hyperlinks to websites, endnotes, bibliographic references.

The AAUP panel proposal mentioned above sets in motion an important challenge to the publishers of academic works, but I think it does not go far enough. It

does not challenge the privileging of the linear “long-form” text as our means of expressing the interpretation of data and of creating narratives. The archaeological project at the 1st mill. BC Latin city-state Gabii, near Rome is, in its Gabii Goes Digital¹ sister project, struggling to come up with a solution to the integration of data and image media with the interpretive and descriptive narrative: “As we distill our data and construct narratives for publication, we want to embed the rich digital data and model-based visualizations which helped us to arrive at the narrative.” So far even they have not gone beyond pdfs with hyperlinks.

One solution may be to take inspiration from some of the early hypertext and hypermedia works of fiction in the humanities in the 1990s pioneered by Michael Joyce and Jay Bolter, and the development of software such as Storyspace, Apple Hypercard, and Macromedia Authorware. Their use was certainly an inspiration for my own early digital work. What characterized these works was that they were willing to break down the linear long-form narrative into fragments that could then be linked to each other in multiple paths. The fragmentation of linear text into works that can be “read” or rather “navigated” in a non-linear fashion is not new to printed or digital works but it has never really “caught on” or gone beyond the designation ‘experimental’, until recently with the upsurge of fragmented literature especially through formats such as database narratives, web-based literature and computer games.

Another source of inspiration – at least for my own work in integrating narrative with data and image media – has been the concept of Database Narratives. Lev Manovich in *the Language of New Media* (2001) pointed out that the opposition of database and narrative is a symbiotic one in which the data structure of databases contrasts to the algorithmic structure of a narrative. Narratives with an obvious algorithmic structure are drawn out of databases, converting the database logic of entities into narrative algorithms, resulting in the creation of a complex, fluid web of infinite layered interfaces - database narratives².

In 2013 Will Luers, as an introduction to a collection of database narratives, pointed out that the form of narrative that is highly appropriate to the construction of database narratives is the “affective-expressive” narrative – following a tradition of Japanese literature, in which fragments are drawn together without a plot into a lyrical or poetic narrative, often as “episodic ‘ensembles’ of event, voice and image”.³

Steve Anderson⁴ directed the idea of database narratives towards the construction of narratives of history, what he called ‘digital histories’ or ‘recombinant histories’ that are “collections of infinitely retrievable fragments, situated within categories and organized to predetermined associations, ...by which the past may be conceived as fundamentally mutable and reconfigurable”.

¹ <http://gabiiserver.adsroot.itcs.umich.edu/gabiigoesdigital/>

² <http://www.softcinema.net/index.htm?reload>

³ <http://dnaanthology.com/anvc/dna/plotting-the-database>

⁴ <http://www.technohistory.net/?p=134>

By now it is probably clear that this concept of an endless combination of fragmentary narratives harvested from a database has become a guiding principle of my current construction of the past through archaeological research. Although the majority of archaeological narratives are constructed as coherent linear narratives with a beginning, middle, and end that, moreover, focus ultimately on broad and long-term themes, I have argued elsewhere (1994) that archaeological data are in the first instance most appropriate for narratives that are non-linear fragments and written at an intimate scale.

III. *Last House On The Hill* and the Codifi App

The Codifi app⁵ that we have developed at the Center for Digital Archaeology is designed to enable an archaeologist, a museum/cultural heritage professional, or anyone with media in multiple formats and other data to integrate and synchronize the entities into a flexible database with effective data management tools and workflows. With its born archival workflow it is a solution that saves time and gains long-term security for data and media management, whether you are working in the field or with legacy data. Most importantly, from my point of view, with Codifi you can build a database that can easily be harvested, using reliable source data, for publishing narratives, whether as long-form texts (reports, articles and books), or non-linear database narratives (websites, web exhibitions, and even computer games).

The Codifi application has been a long time in the dreaming, since Michael Ashley and my early work with archaeological projects in Southeast Europe in the 1990s. Its actual development started in 2009 and is currently being tested with projects as far apart as Israel and Australia. But its application that I will focus on in this presentation is with the legacy data from our archaeological project of excavation and analysis at the site of Çatalhöyük in Central Turkey, a 9000-year old Early Ceramic Neolithic settlement mound.

The Çatalhöyük Research Project, directed by Ian Hodder (now of Stanford University), started in 1993 and continues until the present day. During the summers of 1997-2005, I directed a team from the University of California at Berkeley (BACH project), as part of the overall CRP. The printed monograph report of the BACH project, entitled *Last House on the Hill*⁶ was published in November 2012. It is ultimately a work that selects, describes, synthesizes and makes sense of the products of the excavation for a public who is outside of the realm of the project, but who are likely to work in the domain of archaeology. Out of necessity it comprises a selection of photographs (rendered as black-and-white) and line drawings as its 517 figures, and 73 tables that synthesize and remediate some of the “raw data”.

From the beginning of the BACH project, our aim was to create a database that would enable a broader public to search and explore the complete set of the visual media and raw data that was of necessity left out of the monograph report. As the

⁵ <http://codifi.org/codifi/>

⁶ http://www.ruthtringham.com/Ruth_Tringham/HouseLives.html

project progressed and digital (including Internet) technology developed, we rejected the idea – characteristic of the time of the commencement of the BACH project (1997) – to have a companion DVD at the back of the volume, in favor of a fully independent downloadable or online database that would act as an enlarging, enriching mirror of the printed volume.

The database that has been created is also titled *Last House on the Hill* (LHotH)⁷ and with its 20,000 images, 2750 video clips, raw data of all 150 features and 1200 units, and documents and diaries of every working day of the project, as well as the contents of the printed edition itself, we feel that we have captured the full documentary evidence of the BACH project. Each item is recorded as a separate entity of place, person, thing, event or representative media in the database with its own URL, and related in a number of different ways to other entities.

For the purposes of this presentation, I think it is important to note that the long-form text of the printed monograph was fragmented into its individual sub-sections, each section transforming into an entity of LHotH, related to associated entities of images, videos, texts and alphanumeric data. In this way we, in effect, prepared the database for harvesting and the creation of subsequent database narratives.

IV. Digital Afterlives of the BACH Project

In my presentation I will go into more detail about the construction of some of these remediations of the BACH data/visual media⁸. Some of them were built using the visual media Extensis Portfolio catalog and the database that was developed before Codifi, but their aim has always been the same – to encourage a broader public to explore the source data of the BACH project that underlies the secondary interpretations and descriptions. These include the web exhibition *Remixing Çatalhöyük* (2007); *Okapi Island* (2006-2012, now defunct) - a model of Çatalhöyük East Mound built in the virtual world of Second Life; and *Remediated Places* (2005-2007), a series of iPod video tours of the archaeological excavation areas enriched by the addition of image and audio media from the BACH project.

In December 2013 we launched a Web edition of the *Last House on the Hill*⁹, powered by the Mukurtu CMS¹⁰, which is a selection of data extracted from the Codifi database to share on the Internet. However, the project of recombinant history that has been drawn out of the Codifi engineered *Last House on the Hill* database, and one which currently occupies my creative energies, is a network of fragmentary stories and biographies called *Dead Women do Tell Tales*¹¹. The entities of the *Last House on the Hill* (LHotH) database are structured around observable phenomena and

⁷ http://www.ruthtringham.com/Ruth_Tringham/Last_House_on_the_Hill.html

⁸ http://www.ruthtringham.com/Ruth_Tringham/BACH_digital_publications.html

⁹ <http://lasthouseonthehill.org/>

¹⁰ <http://codifi.org/comunn/>

¹¹ http://www.ruthtringham.com/Ruth_Tringham/Dead_Women_Do_Tell_Tales.html

their interpretations that do not stray far from the latter. The same entities in the context of *Dead Women Do Tell Tales*, by contrast, are structured as narrative fragments that are likely to be thickened by their association with narratives of creative imagination. I feel comfortable with the use of my creative imagination to build on my modern archaeologist's empirical observations to create events and multi-sensory experiences in the lives of objects and people. The ambiguity of these interpretations guarantees that they will fall far short of "the truth".

These fragmentary narratives, whether created from the database or my imagination may comprise images, videoclips, audioclips and texts that are related in a tangle, behind which is a hidden structure that collects them into "microhistories" that are focused on everyday people, animals, things, and events. In the most recent development of *Dead Women Do Tell Tales*, this same configuration of entities assembled into microhistories is retained, but now they are structured additionally as a game that is still early in its design, but is becoming more clearly defined as a system of rewards, allowing a player to recognize that the narratives (and their knowledge) are cumulative. Thus to understand one microhistory leads gradually to a more richly clothed, noisier, and more colorful unfamiliar culture, whether of the past residents or the archaeological project, as an infinite array of new microhistories ready for exploration opens up until the player feels quite familiar in this unfamiliar culture.

The anticipated audience of *Dead Women Do Tell Tales* are lifelong learners (i.e. any age from 9 to 90), people who have curiosity and imagination, who love small intimate stories of everyday life, who love "aha" moments of solving mysteries, who love to work things out for themselves when presented with information (clues), and people who love to participate in other cultures, learning the language, tasting the food, and listening to stories. The aim for the explorer of *Dead Women Do Tell Tales* is to experience as participant observers two very different cultural contexts: the world of residents of a place – a settlement mound - that is 9000 years old for us and at least 500 years old for them; and the world - also unfamiliar - of the archaeologists who are revealing the Neolithic residents and constructing the Neolithic world from its material remnants.

As I mentioned, this game is very much in embryonic stage of its design, but I believe that ultimately, it might act as a model for a publication strategy to take advantage of all that digital technology can offer to integrate humanities data with humanities narratives in a way which is creative and will inspire creativity in others.

Keywords: Digital Publication, Archaeology, Cultural Heritage, Database Narratives, Computer Games

片段、軸心、跳躍：串接資料庫敘事，改變數位出版

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本報告將以土耳其 Çatalhöyük 土丘考古計畫為例，說明對人文研究進行的長期保存與永續工作，並探討文件數位化、呈現與出版三者更深廣的意涵。

一、出版：印刷／類比和數位

在此我採用「出版」的廣義定義，意指「使某物公開；使某事物普遍被知道的行為」。「出版」這個術語也包含對自己以外的公眾分享，以促進公共知識的累積。因此這個術語包含在各式媒體上被分享的成就。

一方面，實體媒介例如紙本（圖書、翻印、報告、期刊、雜誌、日記）或桌上遊戲；類比媒體如攝影膠捲和相紙、視頻和錄音帶；或是考古學家的田野與實驗室手繪圖及填滿資料之表格。在紙本上分享的作品由出版商和編輯者完全掌握，他們形同散佈知識的守門員。對於學術知識的出版，傳統上作者必須經歷同儕審查的過程，以確保其研究成果有相當程度的知識貢獻。在考古學和遺跡研究的領域有相當數量的「灰色文獻」，這些領域為客戶製作了報告，但這些報告並沒有經過上述的學術出版過程，使得他們的工作成果的傳佈範圍較為狹隘。對於模擬媒體的創作藝術家而言，他們作品的傳佈甚至比學者更為困難。

另一方面，數位（或稱電子）出版則是個非常新穎的世界。始於 1971 年的古騰堡計畫被視為它的開端，公有領域文獻被再製並且可在網路上取得；但直到 1990 年代網際網路全球資訊網開始使用後，這個計畫的文庫才大量增加，伴隨著線上版本的雜誌以及其他形式創作的產生。到了 2000 年，數位出版已確立其地位。與此同時，亦有來自印刷出版社與雜誌社的抗拒聲浪，因他們擔心會失去對版權的控制權，以及失去出版品和訂閱的收入。「數位出版使作品能立刻且隨時隨地被取用，消除了大量的運輸、儲存和零售設施等物流成本」。大多數人或許對 1990 年代以來贊成或反對數位出版之爭論史十分熟悉，包括 J. Yellowlees Douglas (2001) 圖書的終結—或是沒有終點的圖書?以及 Jay Bolter and Richard Grusin (1999) 修復:了解新媒體。

我的本意並非要論述印刷和數位媒體的利弊；辯論仍在繼續，而在座各位很可能是站在數位媒體的一方。我的本意是不要將數位出版視為印刷和類比出版之替代品—也就是說，並非仿作的產品—而是一種完全不同的知識生產形式，另一種與公眾分享和參與的知識生產方式：視覺和聽覺展覽、敘事視頻、簡報、部落格、資料庫敘述、重組歷史、透過遊戲介面報導新知識；以上全部都是可即時取得的，可以被分享及根據作者的分享規則做出評論，並且是開放式和可修改的。

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我不需重申其他作者已經寫過的，我們正走在「出版」的革命之路上。我的報告將透過一個考古學的例子來論證這場革命。

但在我這麼做之前，我們先來談談今年（2014）美國大學出版社協會（American Association of University Presses, AAUP）年會中，對於「數位人文出版」小組會議的介紹引言：

「許多大學推行了重要的數位人文先導計畫。數位人文已成為眾多不同議題的中介，作為人文學科的出版者，我們很可能需要為了我們能出版的事物拓展可能性。數位人文學者可能會繼續書寫長篇形式的文本，但更多的時候它會嵌入數位人文特徵，例如多媒體文件、空間繪圖、資料集、檔案資料庫和社會沙盒。我們要如何發佈這些不同形式的作品？這又將如何影響我們編輯、行銷、生產和其他員工的作業？印刷廠需要什麼類型的合作來出版這些新的多模式書籍？這些書會是純數位的嗎？」

二、超越傳統印刷和數位模擬的出版策略(pdf)

上面的引述強調出數位形式出版的好處以及其尚未被充分利用。數位世界的優點是不同的媒體(廣義而言包括「長篇形式」文本)能透過可立即取用的原始資料網路匯聚在一起，並能透過連結、嵌入，或是實體與類比形式無法做到的纏繞方式進行詮釋。我相信這些潛在優點在人文學科被使用不足的原因之一是，長行文本在知識分享(儘管有註解)上的主導地位；即使採用數位形式，這個形式仍是一種不可編輯的線性敘事(pdf)，至多鏈接到網站、尾註及參考書目。

上面提到的 AAUP 小組建議帶給學術出版商一個重要的挑戰，但我認為這還遠遠不夠。它沒有挑戰線性「長篇形式」文本在作為我們表達資料詮釋和創造敘事之方法的特權。Gabi 為地理位置鄰近羅馬的西元前拉丁城邦，在第一廠考古計畫中的姊妹計畫 Gabii Goes Digital¹，努力想要找出資料整合和具有解釋性與描述性敘述之圖像媒體的解決方案：「當我們提煉我們的資料並為出版建構敘述，我們想要鑲嵌豐富的數位資料和具模型基礎的視覺化，其幫助我們達到敘事。」儘管到目前為止他們仍未超越有超鏈接的 pdf。

其中一個解決方案應該是採取來自早期超文件和超媒體作品的靈感，1990 年代以 Michael Joyce 和 Jay Bolter 為先驅的人文領域小說，以及軟件開發例如 Storyspace, Apple Hypercard, 以及 Macromedia Authorware。他們的手法無疑成為我自己早期數位作品的靈感。這些作品的特點是他們有意打破長式線性敘事，成為可透過多條路徑鏈接的片段。線性文本的片段在非線性方式中可以被「讀取」或甚至「導航」，這對印刷或數位作品而言並不是陌生的，但它從未真正「風行」，或超出指定的「實驗性」，直到最近零散文學浪潮高漲，尤其是透過諸如資料庫敘述、網路文學和電腦遊戲的形式。

另外一個靈感來源——至少以我個人在資料和圖像媒體整合敘述的作品——已經是資料庫敘述的概念。Lev Manovich 在新媒體的語言(2001)指出資料和敘

¹ <http://gabiiserver.adsroot.itcs.umich.edu/gabiigoesdigital/>

事的對立是共生的，其中資料庫的資料結構與敘事中規則系統的結構相反。擁有明顯規則結構的敘事是由資料繪製出來的，轉變資料的邏輯，將實體轉為敘事規則，造成複雜且流動性的產物，擁有無限層介面的網絡--資料庫敘述²。

2013年，Will Luers 介紹資料庫敘事集合，指出對於資料庫敘事建構高度合適的敘事形式為「情感—表達」敘事—跟隨日本文學的傳統，片段被聚在一起但沒有抒情或詩意敘事的情節，經常是「以偶發插曲組成的事件、聲音和影像」。³

Steve Anderson⁴ 指明資料庫敘述對歷史敘述建構的想法，他稱之為「數位歷史」或「重組歷史」，他們是「無限可恢復片段的集合，位於類別中，並組織為預定的協會，其過去可能被設想成在基礎上易變的以及可重新分配的。」

如今很明顯的，此一由資料無限片段敘事組合的觀念已經變成我目前透過考古學研究建構過去的指導原則。雖然大部分的考古敘事被建構成相關線性敘事，有著開頭、中間和結尾，並且最終專注於廣泛且長期的主題構造，我已在別處（1994）論證，考古資料是第一個最適合非線性片段敘事且得以詳細書寫的實例。

三、最後的山上小屋(*Last House On The Hill*)及 Codifi 應用程式

我們在數位考古中心開發的 Codifi(編纂)應用程式⁵ 是設計來使考古學家、博物館/文化遺跡專家、或任何擁有多媒體和其他資料的人進行整合並同步，使實體成為具備有效資料管理工具和工作流程之彈性的資料庫。憑藉其天生的檔案工作流程，它是節省時間和增加長期資料和媒體管理安全的解決方案，無論你在實地工作或使用遺留的資料。最重要的是，根據我的觀點，Codifi 可幫助你建立能輕鬆收成的資料庫，使用有可靠來源的資料，為了出版敘述，無論是長形式的文本（報告、文章和圖書）或非線性資料敘述（網站、網路展示甚至電腦遊戲）。

Codifi 應用已在夢想中存在很長的時間，源起於 Michael Ashley 以及我 1990 年代在東南歐考古計畫。它的實際開發始於 2009，最近正被進行計畫測試，遠至以色列和澳洲。但對於它的應用，此次呈現我會著重在 Çatalhöyük 考古計畫的遺留資料，該計畫為開鑿和分析位於土耳其中部的 Çatalhöyük，這是一個具 9000 年歷史的早期新石器陶瓷時代拓居土墩。

Çatalhöyük 研究計畫由 Ian Hodder（現任職於史丹佛大學）主持，始於 1993 並持續至今。在 1997-2005 的夏天，我帶領一個來自加州大學柏克萊分校的團隊（BACH 計畫），為整體 CRP 的一部分。被印刷的 BACH 計畫專體論文，標題為 *Last House on the Hill*⁶，在 2012 年的 11 月被發表。它是一個終極的作品，其選擇、描述、綜合，使挖掘出的產物對於在計畫範疇之外卻又有可能在考古領域工作的大眾有意義。出於需要，它包含了精選的照片（黑白呈現）以及線條畫，

² <http://www.softcinema.net/index.htm?reload>

³ <http://dnaanthology.com/anvc/dna/plotting-the-database>

⁴ <http://www.technohistory.net/?p=134>

⁵ <http://codifi.org/codifi/>

⁶ http://www.ruthtringham.com/Ruth_Tringham/HouseLives.html

伴隨綜合和修復某些「原始資料」的 517 個圖表和 73 個表格。

自從 BACH 計畫的開始，我們的目標是創造一個資料庫，這將使更廣泛的大眾能夠搜尋並探索該專題論文報告當中完整的視覺媒體和原始資料。隨著計畫的進展以及數位（包括網路）科技的發展，我們推翻了 BACH 計畫（1997）開始時的想法--在一系列書籍末頁附上 DVD，取而代之的是一個完全獨立，可下載或線上使用的資料庫，可做為印刷書籍擴大化、豐富化的版本。

被創建出的資料庫同樣命名為 Last House on the Hill (LHotH)，涵蓋 20,000 個影像，2750 個式頻片段，150 個文物和 1200 個單位的原始資料，以及該計畫所有的文件和工作日誌，當然還包含了印刷版本的內容，我們認為我們已完整捕捉所有 BACH 計畫的文件證據。每個物件在資料庫中有專屬的 URL，分別記錄其地點、人物、事物、事件或媒體形式，並且以數種方式和其他實體連結。

對於本次簡報的目的，我認為提到印刷專題論文的長篇文本被分割為分別的片段是很重要的；片段的各別部分都轉化為 LHotH 的實體，與相關的影像、視頻、文本和字母與數字組成之資料相互串聯。我們利用這樣的方法，為了隨後資料集敘事的收穫和創造，有效地建置了此資料庫。

四、BACH 計畫的數位來世

在我的報告中我會更詳細的闡述關於 BACH 資料／視覺⁸媒體建構的修正。他們當中有些內容是使用視覺媒體 Extensis Portfolio 目錄編輯而成，這是在 Codifi 之前所開發的資料庫，但他們的目的總是相同的——鼓勵更廣泛的大眾探索 BACH 計畫的資料，以此為基礎構成二次詮釋和描述。這些包括 Remixing Çatalhöyük (2007) 的網路展示；Okapi Island (2006-2012, now defunct) ——一個 Çatalhöyük East Mound 在虛擬世界 Second life 建構的模型；以及 Remediated Places (2005-2007)，一系列被 BACH 計畫附加的影像和音頻媒體所豐富的考古挖掘區域之 iPod 視頻之旅。

2013 年 12 月，在 Mukurtu CMS¹⁰ 支持下，我們推出 *Last House on the Hill*⁹ 網路版，從 Codifi 資料庫精選一系列資料，在網路上公開分享。然而，由 Codifi 取出的一個重組歷史計畫操縱了 *Last House on the Hill* 的資料集，且其目前佔據了我的創造力，是一個片段故事的網路以及稱為 *Dead Women do Tell Tales*¹¹ 的傳記。*Last House on the Hill* (LHotH) 資料的實體被可觀察到現象構成且他們的解釋和後者相差不遠。在 *Dead Women Do Tell Tales* 內文中相同的實體，相反來說，被敘事片段建構，其有可能被他們創作想像相關之敘事變複雜。我覺得使用我的創作想像來建造我的現代考古學家的經驗觀察，以創造物體和人生生命之事件和多重感官經驗是舒適的。這些解釋的模糊性保證他們會遠遠達不到「真相」。

這些片段性的敘事，無論是創造自資料庫或來自我的想像，可能包含互相糾

⁸ http://www.ruthtringham.com/Ruth_Tringham/BACH_digital_publications.html

⁹ <http://lasthouseonthehill.org/>

¹⁰ <http://codifi.org/comunn/>

¹¹ http://www.ruthtringham.com/Ruth_Tringham/Dead_Women_Do_Tell_Tales.html

結的影像、視頻片段、音頻片段、以及文本，在他們背後藏了將他們蒐集為專注於每天人物、動物、事物和事件之「微歷史」結構。在最近開發的 *Dead Women Do Tell Tales*，這個結合了實體組成微歷史的結構仍被保留，如今他們又被另外組成一個仍在早期開發階段的遊戲，這個遊戲已逐漸有清楚的獎勵制度，讓玩家能辨認那些敘事(和他們的知識)是累積的。所以為了要了解一個微歷史，逐漸導致一個更豐富裝飾、更吵鬧且更色彩豐富的陌生文化，無論是過去居民或考古計畫，一個無限配置的新微歷史已經為了探索準備好，直到玩家感覺對陌生文化相當熟悉。

Dead Women Do Tell Tales 預設的閱聽族群是任何從 9 到 90 歲的終身學習者，有好奇心和想像力的人，喜愛日常生活的親密小故事，喜愛解開謎底“aha”的片刻，熱衷於運用現有資訊或線索自行破解謎團的人，以及喜愛參與不同文化，學習語言，品嚐其食物並聆聽其故事的人。*Dead Women Do Tell Tales* 探索者的目的是要體驗參與觀察員兩個非常不同的文化背景：一個地方居民的世界——一個殖民土墩——對我們已經有 9000 年的歷史，對他們而言至少 500 年歷史；以及世界——同時是陌生的一對於展現新石器時代居民以及建構新石器時代物質遺跡形式之考古學家。

就如我先前所提，這個遊戲仍在設計的初始階段。但我相信這種充分利用數位科技，結合人文資料與人文敘述，以具有創意且能激發他人創造力的方式，最終可能成為出版策略的典範。

2014 D A D H

關鍵字：數位出版、考古、文化遺產、資料庫敘述、電腦遊戲